

Fig.1

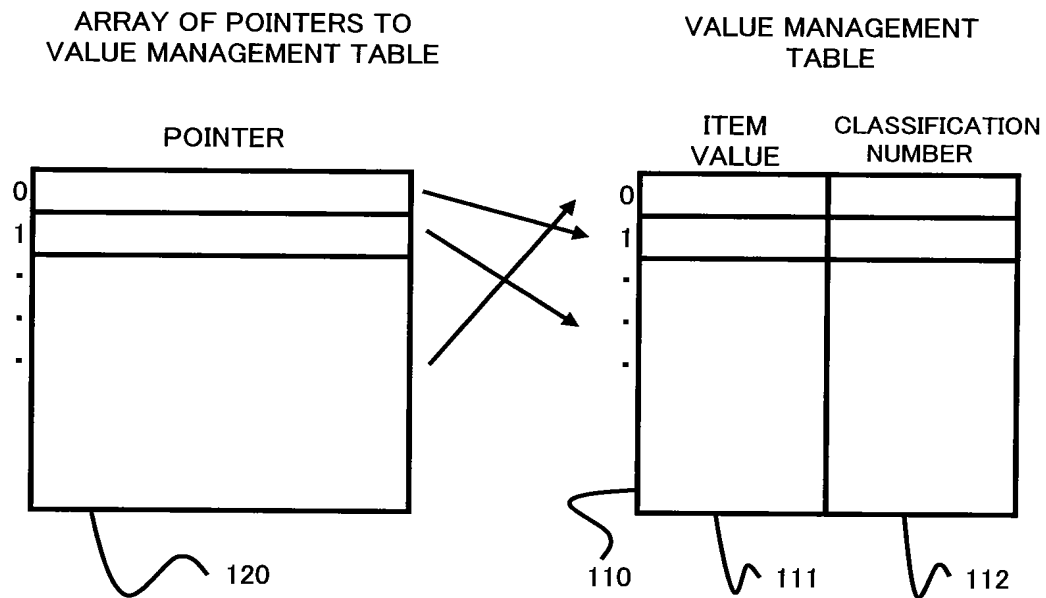


Fig.2

ARRAY OF POINTERS TO
VALUE MANAGEMENT TABLE

VALUE MANAGEMENT
TABLE

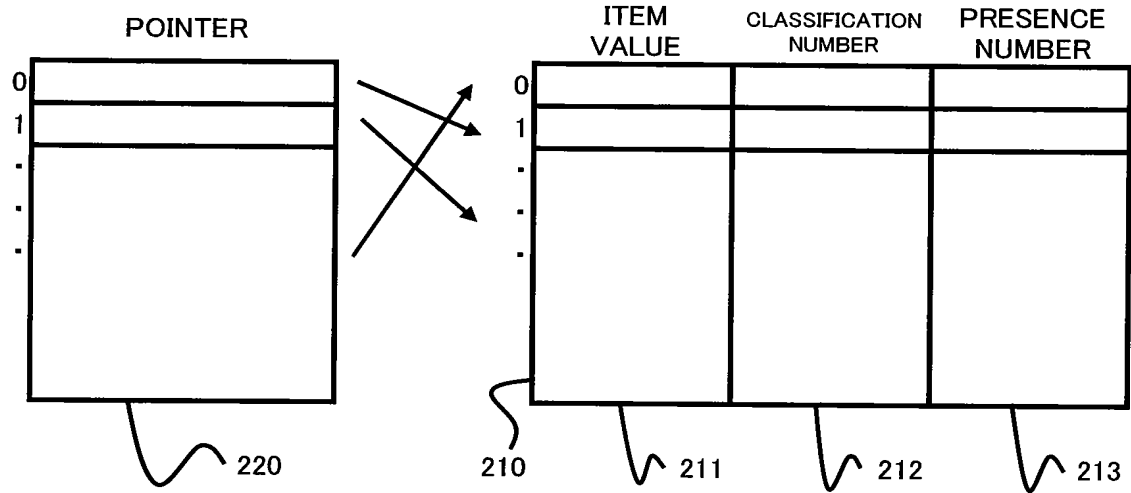


Fig.3

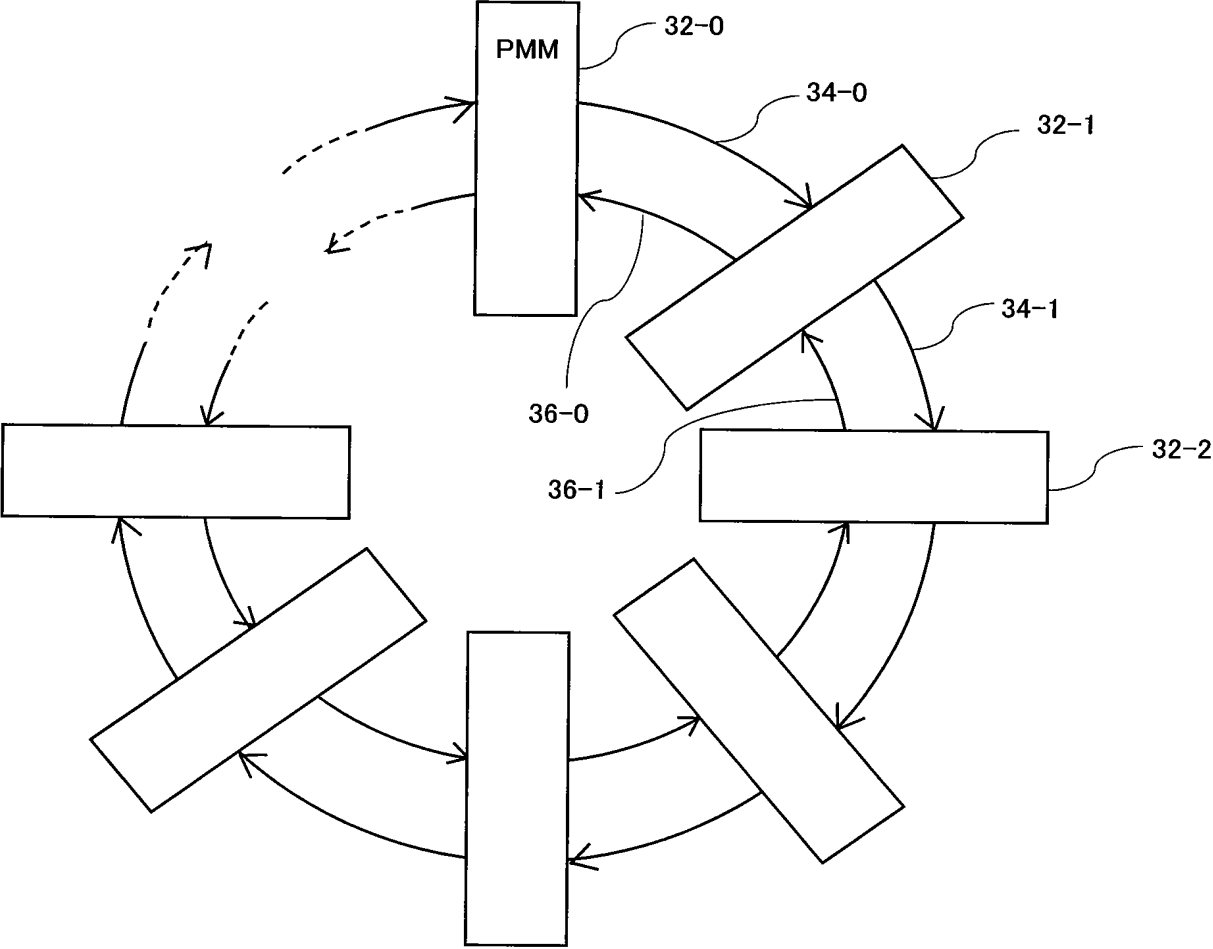


Fig.4

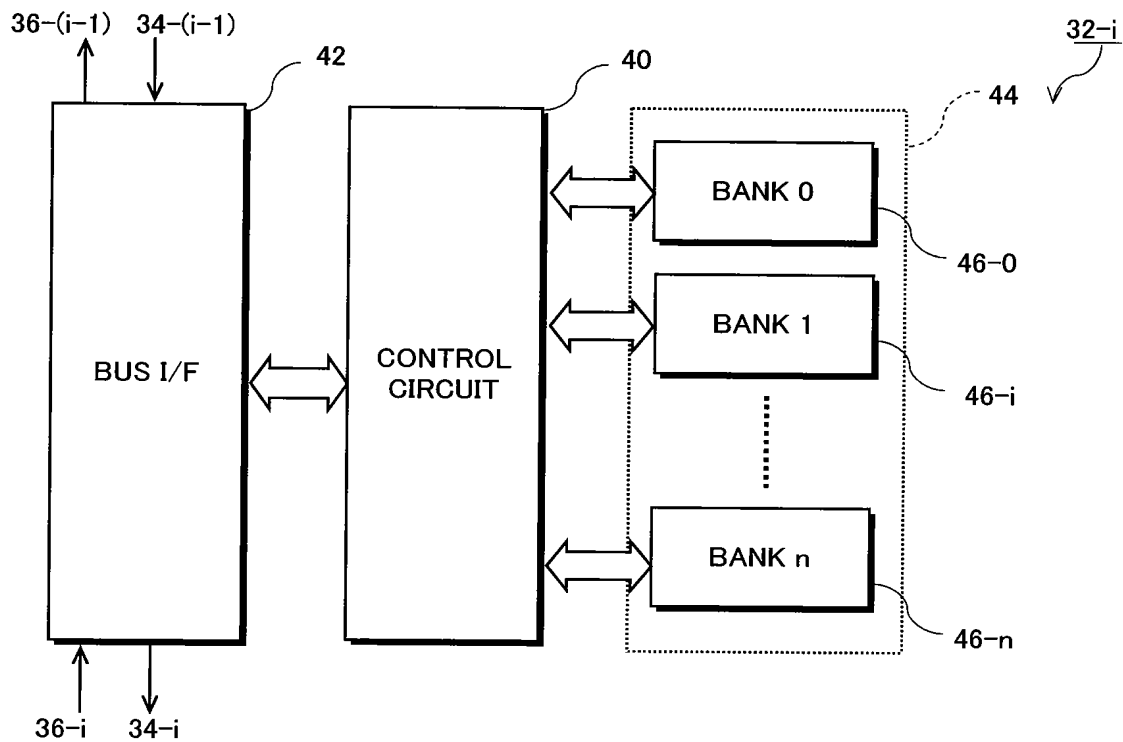


Fig.5

RECORD NUMBER	SEX	AGE	HEIGHT(cm)
0	FEMALE	3	78
1	MALE	1	82
2	FEMALE	2	69
3	FEMALE	1	82
4	MALE	3	91
5	FEMALE	1	76
6	FEMALE	1	78
7	FEMALE	2	84
8	MALE	3	87
9	FEMALE	3	80

Fig.6

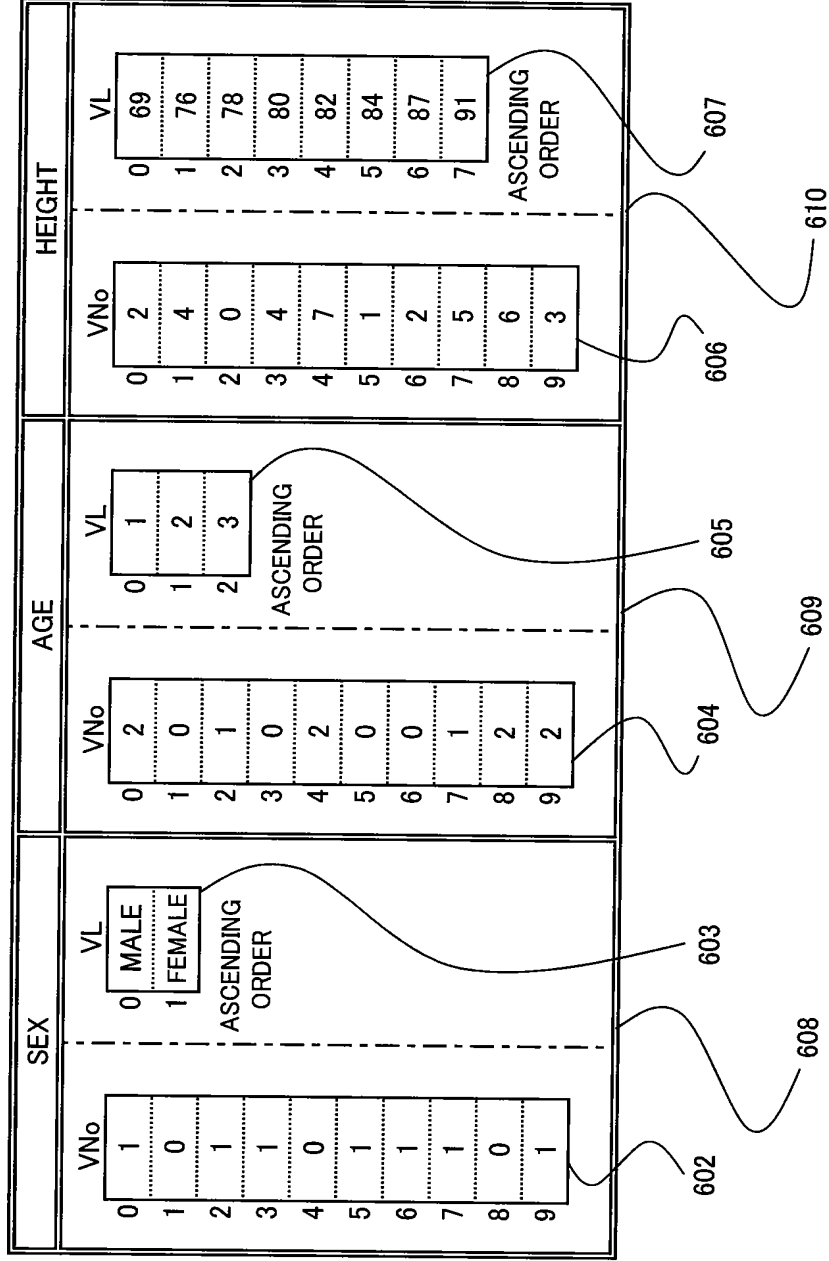


Fig.7

OFFSET=0											
PMM-0				SEX (PMM-0)			AGE (PMM-0)		HEIGHT (PMM-0)		
SEX		AGE		HEIGHT		VN0		VL		GVN0	
0	FEMALE	3	78	0 MALE		0	0	0	1	69	0
1	MALE	1	82	1 FEMALE		1	1	1	2	78	1
2	FEMALE	2	69	2		2	2	2	3	82	2
				ASCENDING ORDER				ASCENDING ORDER		ASCENDING ORDER	
				GOrd		OrdSet					
				0		0					
				1		1					
				2		2					
				ASCENDING ORDER							
PMM-1											
SEX (PMM-1)				AGE (PMM-1)		HEIGHT (PMM-1)					
VN0		VL		GVN0		VN0		VL		GVN0	
0	1	0	MALE	0	0	0	0	0	1	82	0
1	0	1	FEMALE	1	1	1	1	2	3	91	1
				ASCENDING ORDER				ASCENDING ORDER		ASCENDING ORDER	
				GOrd		OrdSet					
				0		3					
				1		4					
				ASCENDING ORDER							
PMM-2											
SEX (PMM-2)				AGE (PMM-2)		HEIGHT (PMM-2)					
VN0		VL		GVN0		VN0		VL		GVN0	
0	0	0	FEMALE	0	1	0	0	0	0	76	0
1	0	1	ASCENDING ORDER	ASCENDING ORDER		1	0	1	1	78	1
2	0	2	ORDER	ORDER		2	1	2	2	84	2
				ASCENDING ORDER				ASCENDING ORDER		ASCENDING ORDER	
				GOrd		OrdSet					
				0		5					
				1		6					
				2		7					
				ASCENDING ORDER							
PMM-3											
SEX (PMM-3)				AGE (PMM-3)		HEIGHT (PMM-3)					
VN0		VL		GVN0		VN0		VL		GVN0	
0	0	0	MALE	0	0	0	0	0	3	80	0
1	1	1	FEMALE	1	1	1	1	2	3	87	1
				ASCENDING ORDER				ASCENDING ORDER		ASCENDING ORDER	
				GOrd		OrdSet					
				0		8					
				1		9					
				ASCENDING ORDER							

Fig.8

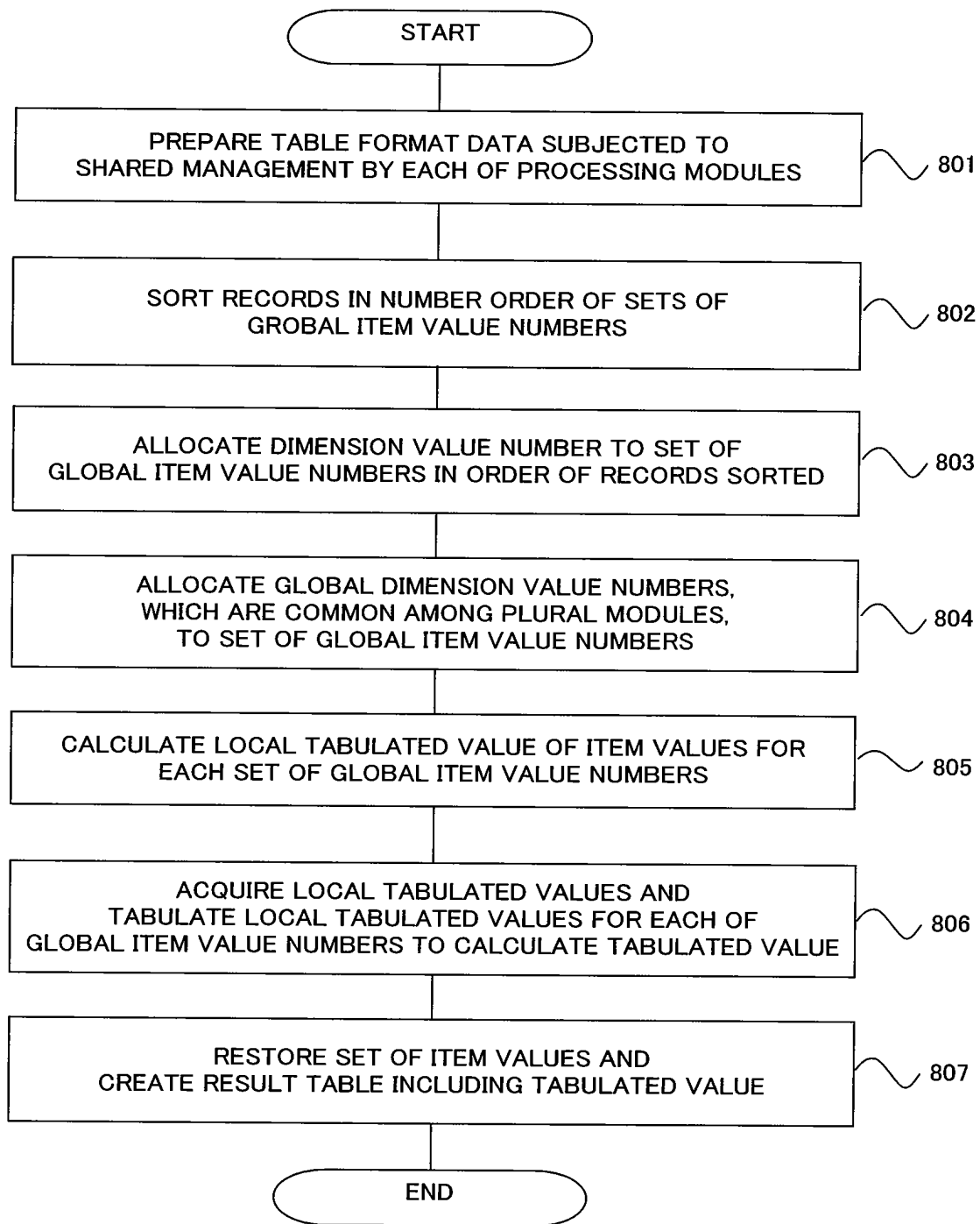


Fig.9

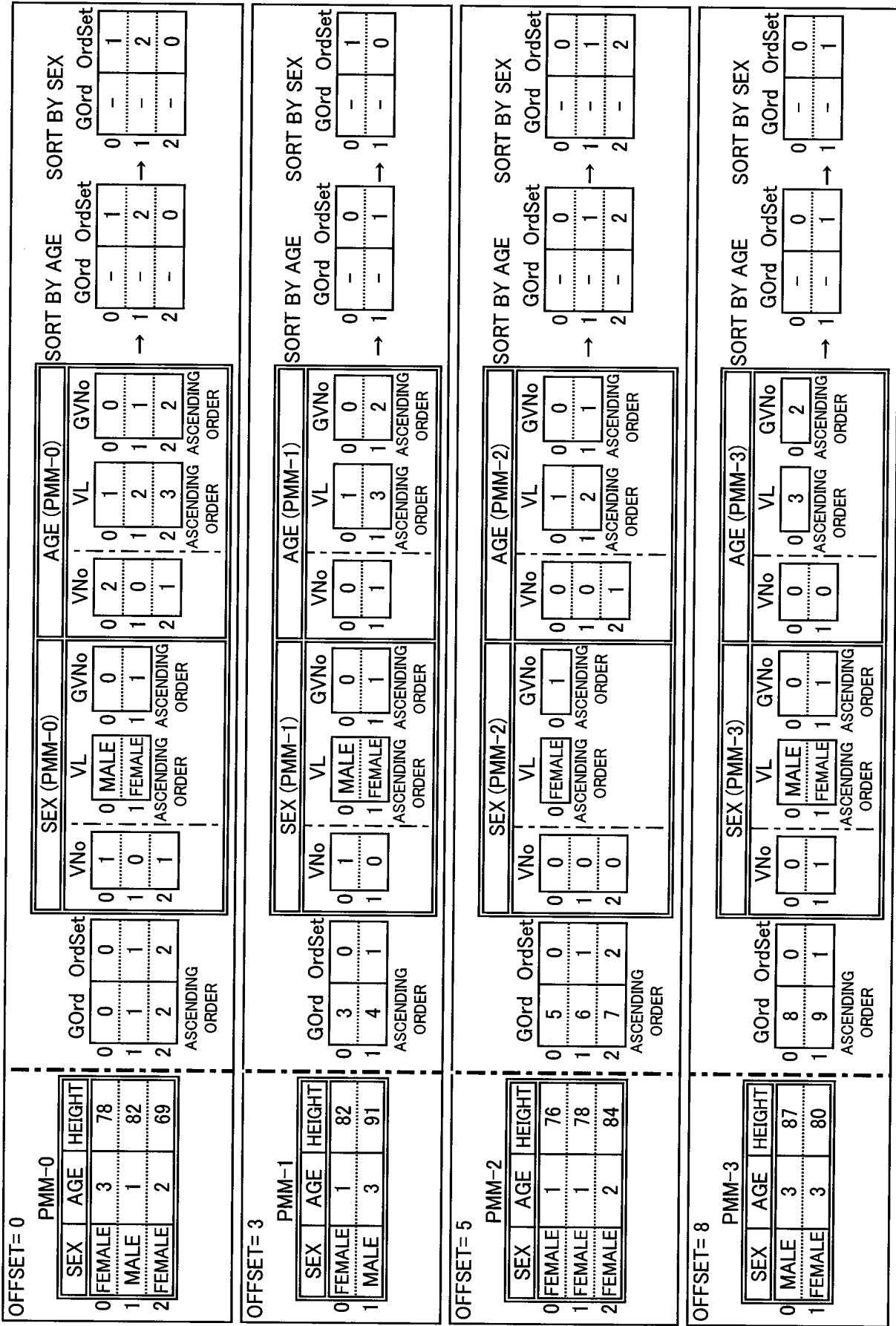


Fig.10

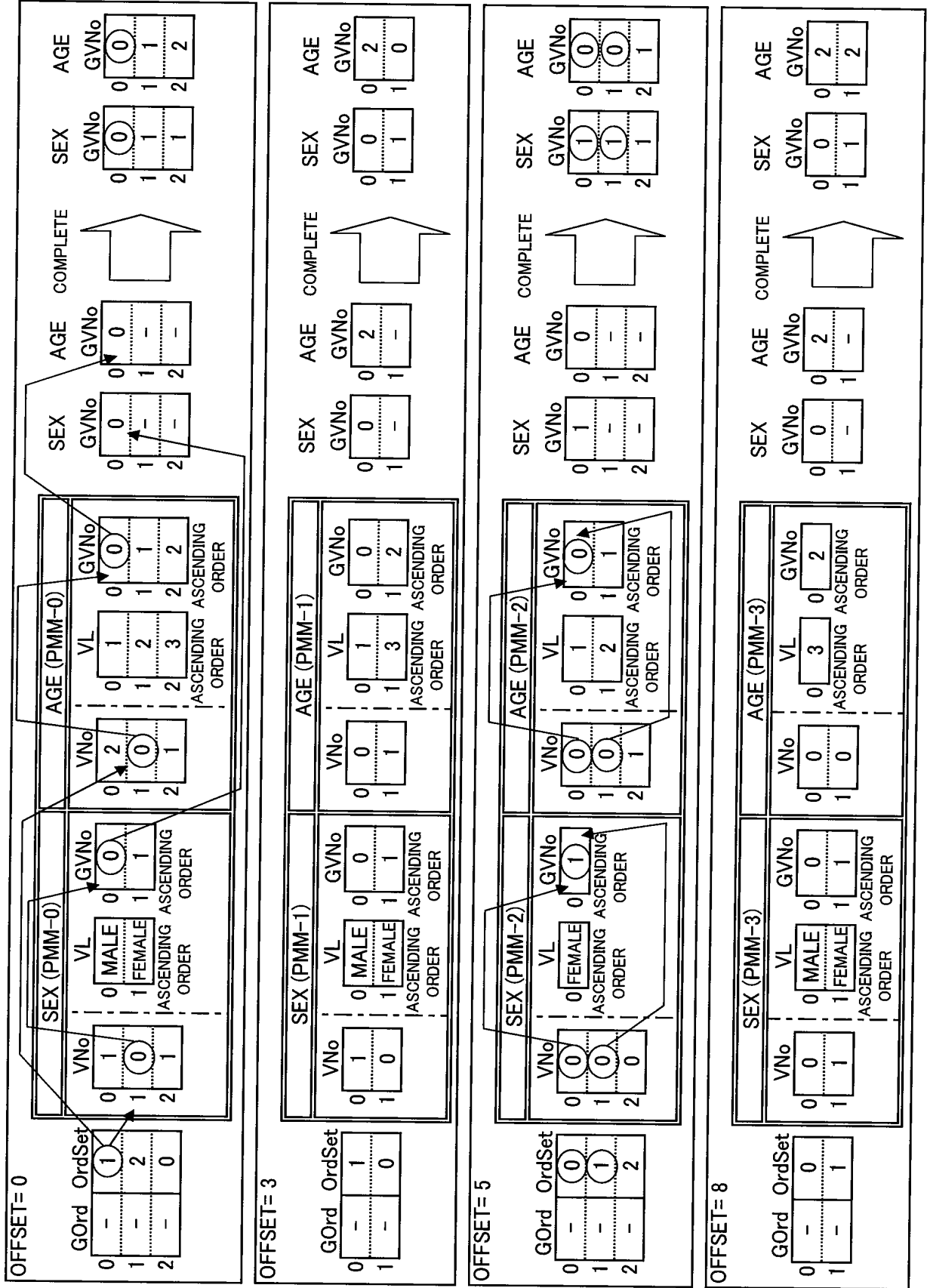


Fig.11

CREATE LOCAL DIMENSION VALUE NUMBER LDimNo
(ORDERING OF DIMENSIONS IN LOCAL)

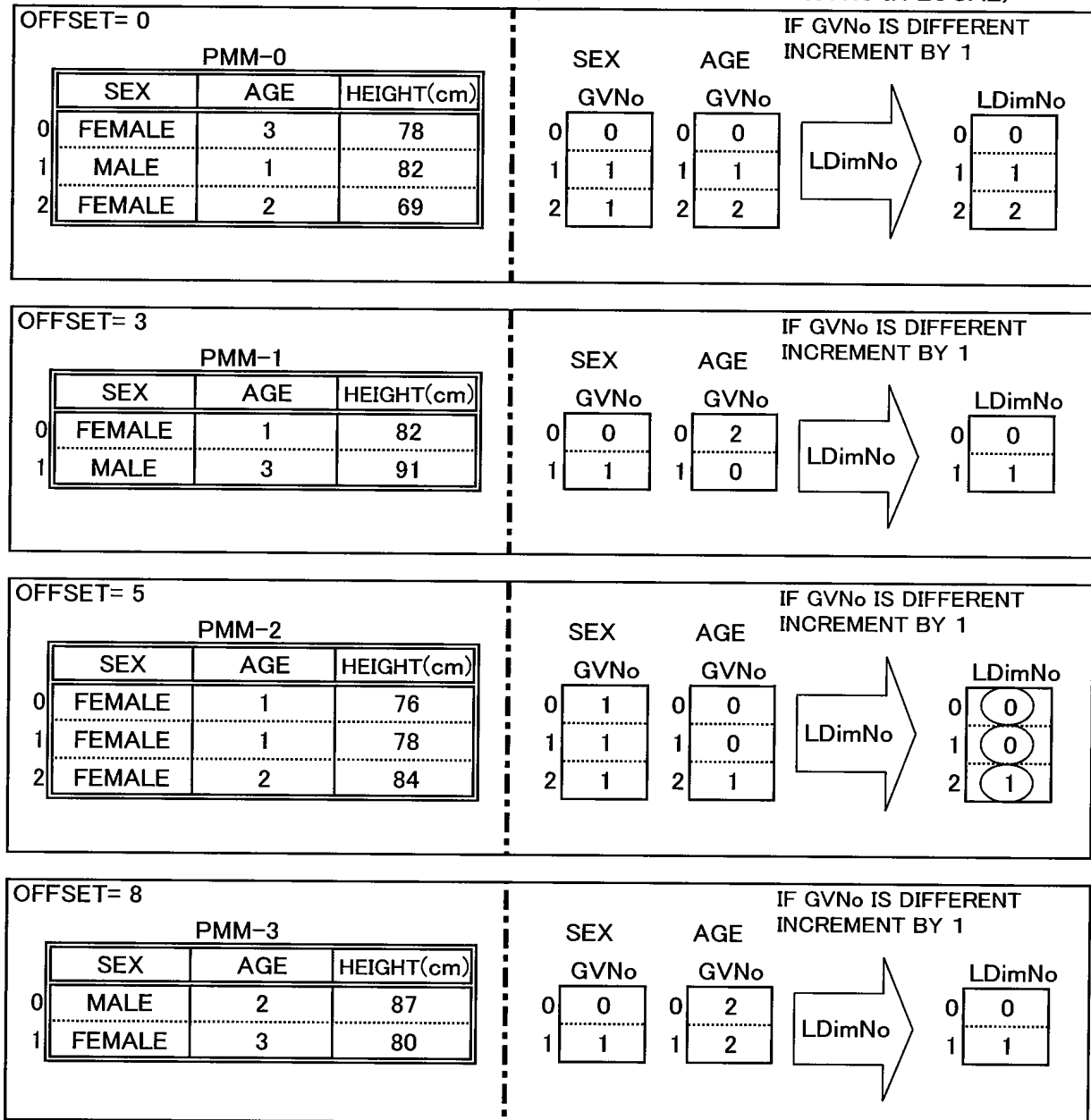


Fig.12

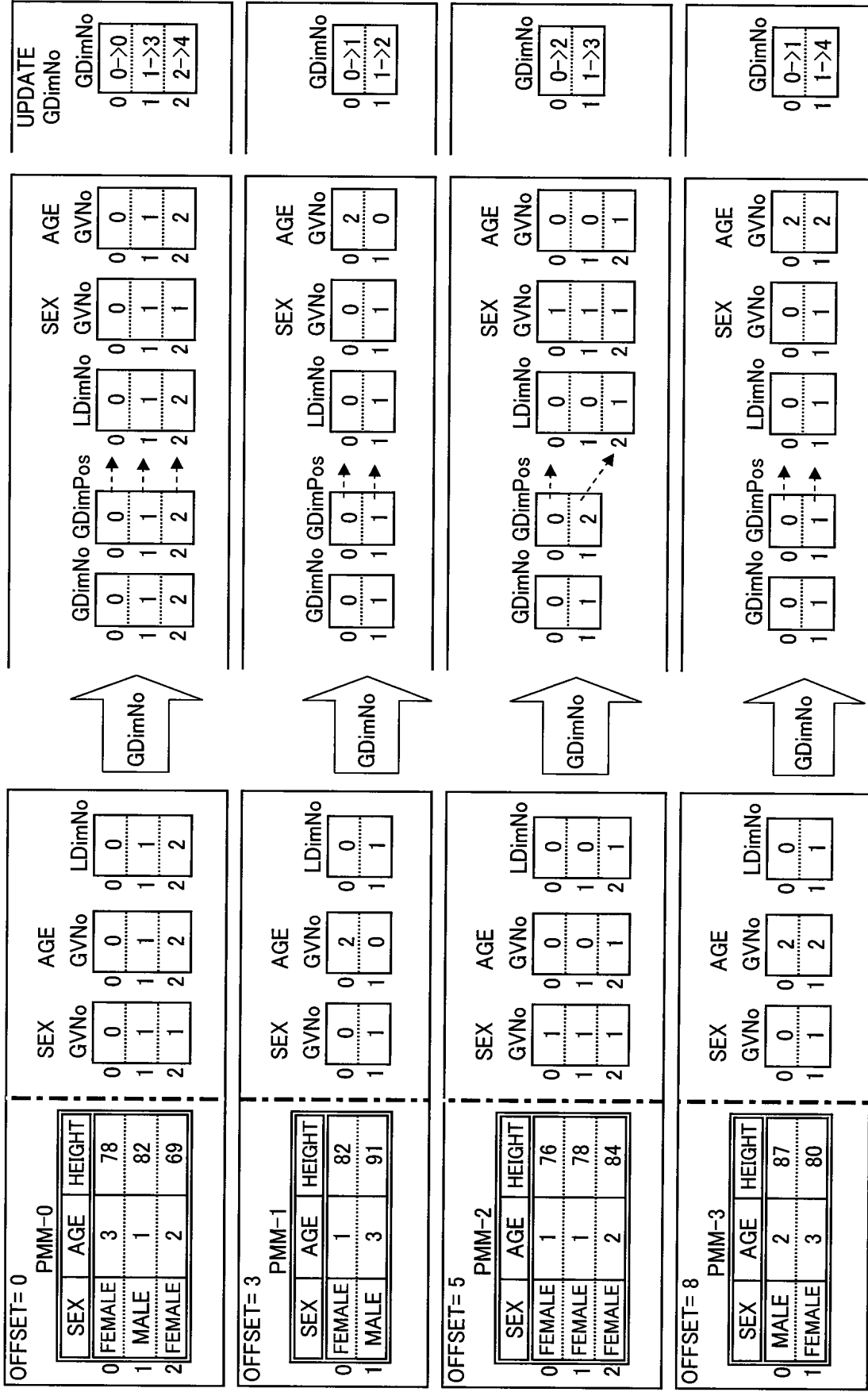


Fig.13

	LDimNo	GNo1	GNo2	GDimNo
PMM-0	0	0	0	0
	1	1	1	3
	2	1	2	4
PMM-1	0	0	2	1
	1	1	0	2
PMM-2	0	1	0	2
	1	1	1	3
PMM-3	0	0	2	1
	1	1	1	2

Fig.14

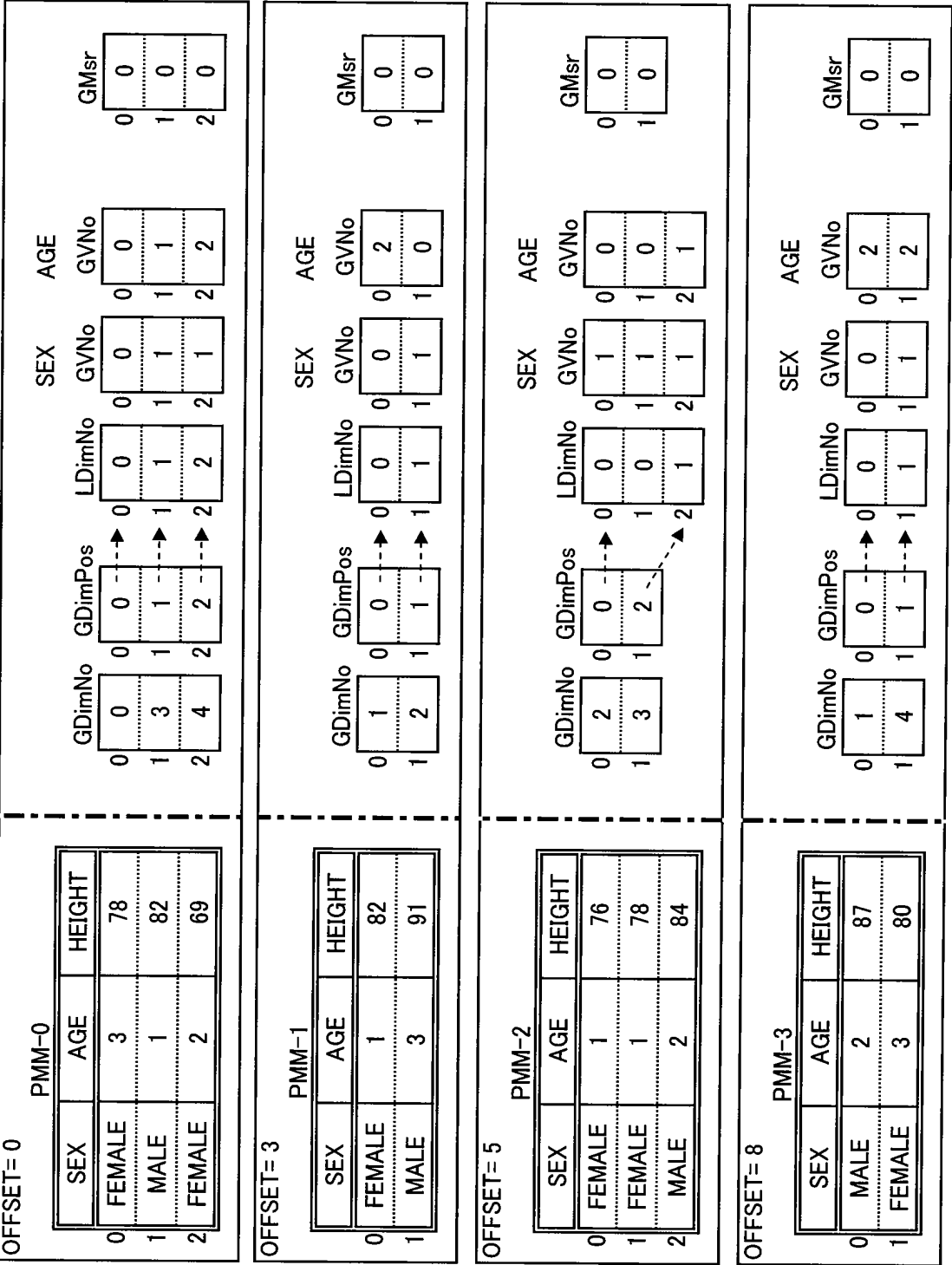


Fig.15

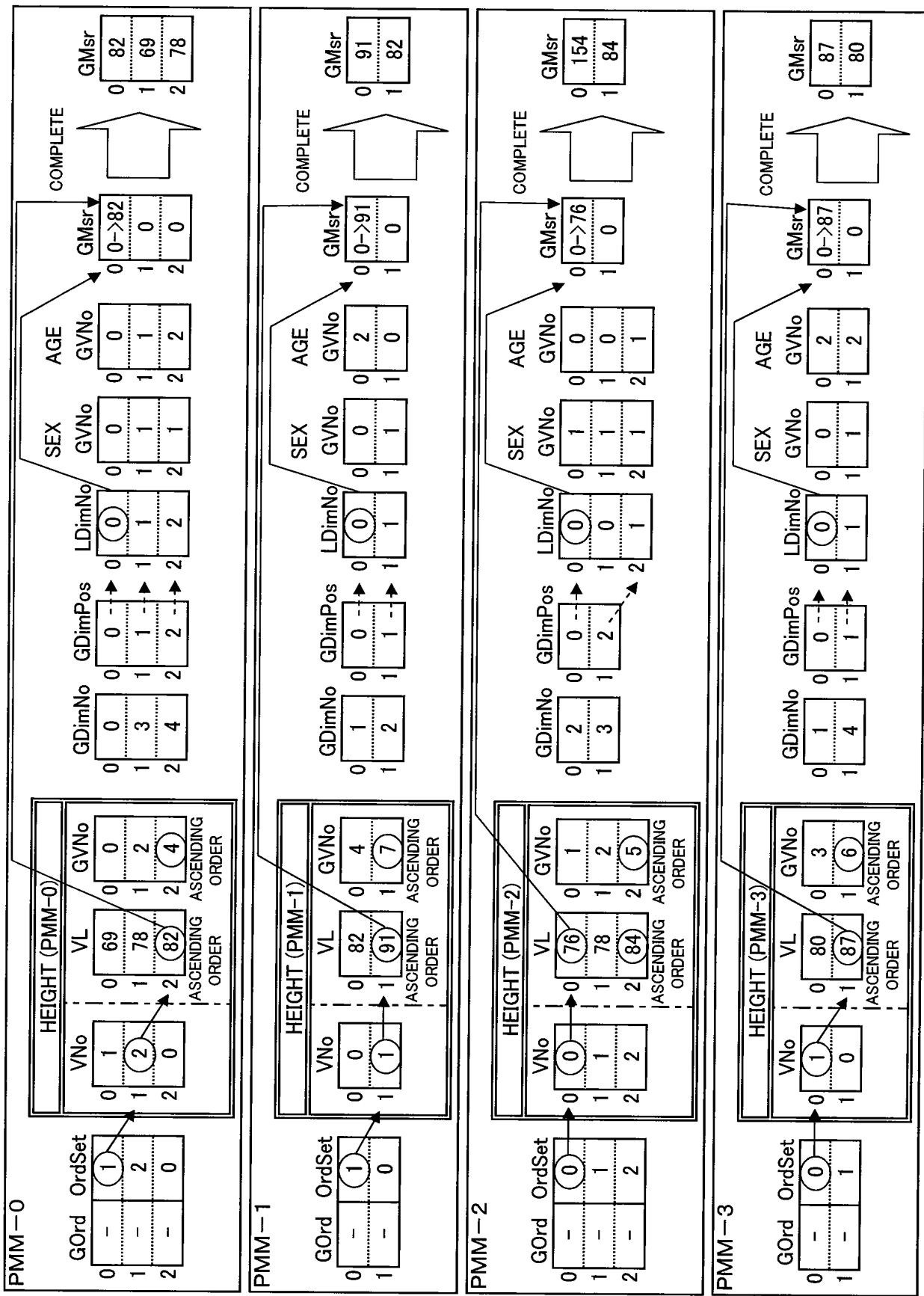


Fig.16

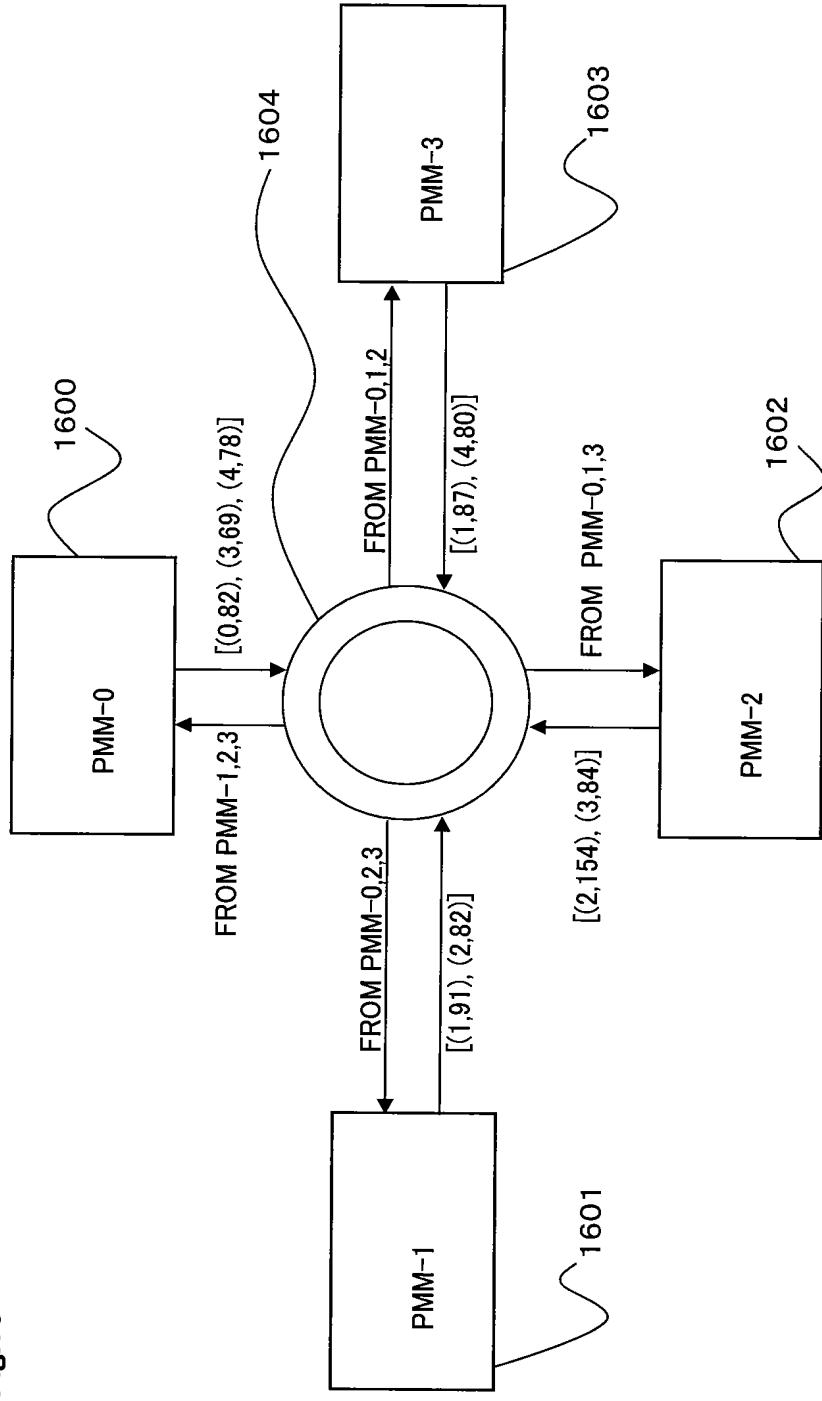


Fig.18

PMM—0

	GDimNo		GMsr
0	0	0	82
1	3	1	153
2	4	2	158

COMPLETE

	GDimNo		GMsr
0	0	0	82
1	3	1	153
2	4	2	158

PMM—1

	GDimNo		GMsr
0	1	0	178
1	2	1	236

COMPLETE

	GDimNo		GMsr
0	1	0	178
1	2	1	236

PMM—2

	GDimNo		GMsr
0	2	0	236
1	3	1	153

COMPLETE

	GDimNo		GMsr
0	2	0	236
1	3	1	153

PMM—3

	GDimNo		GMsr
0	1	0	178
1	4	1	158

COMPLETE

	GDimNo		GMsr
0	1	0	178
1	4	1	158

Fig.19

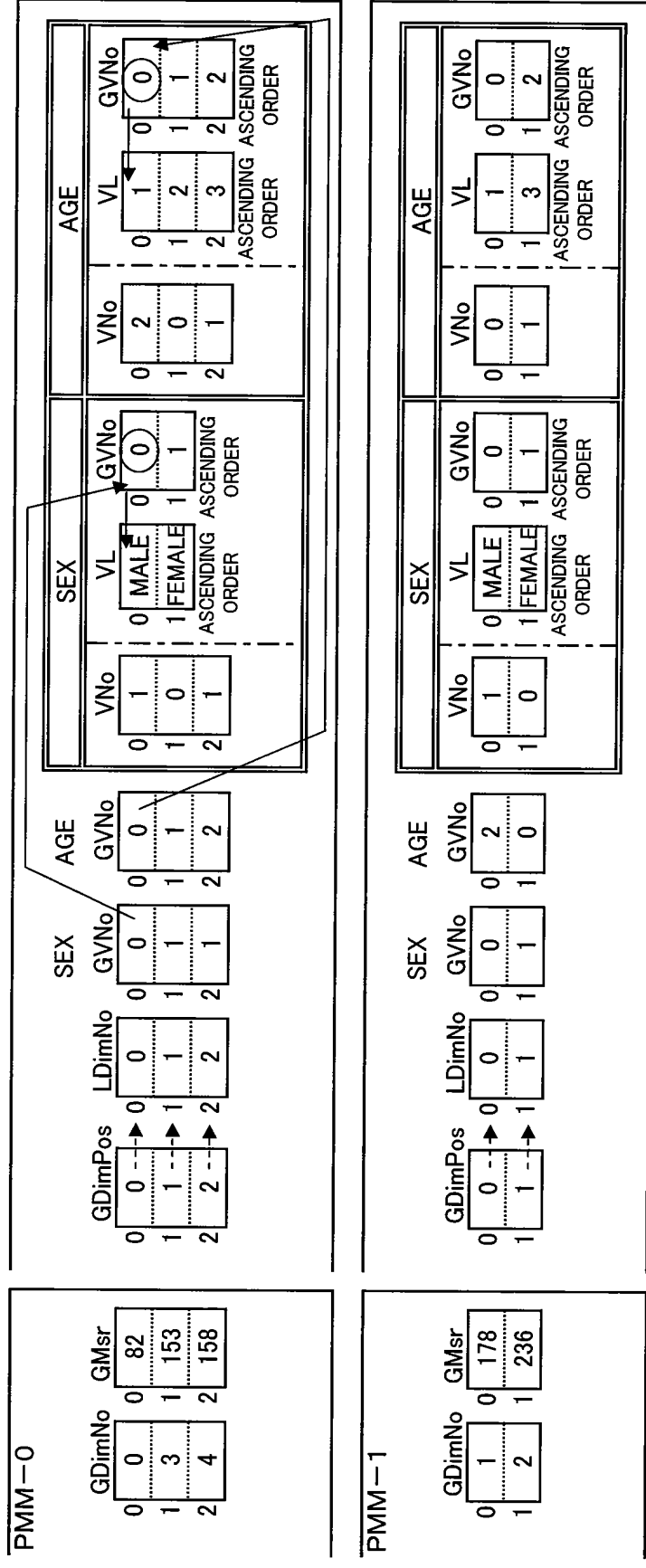


Fig.20

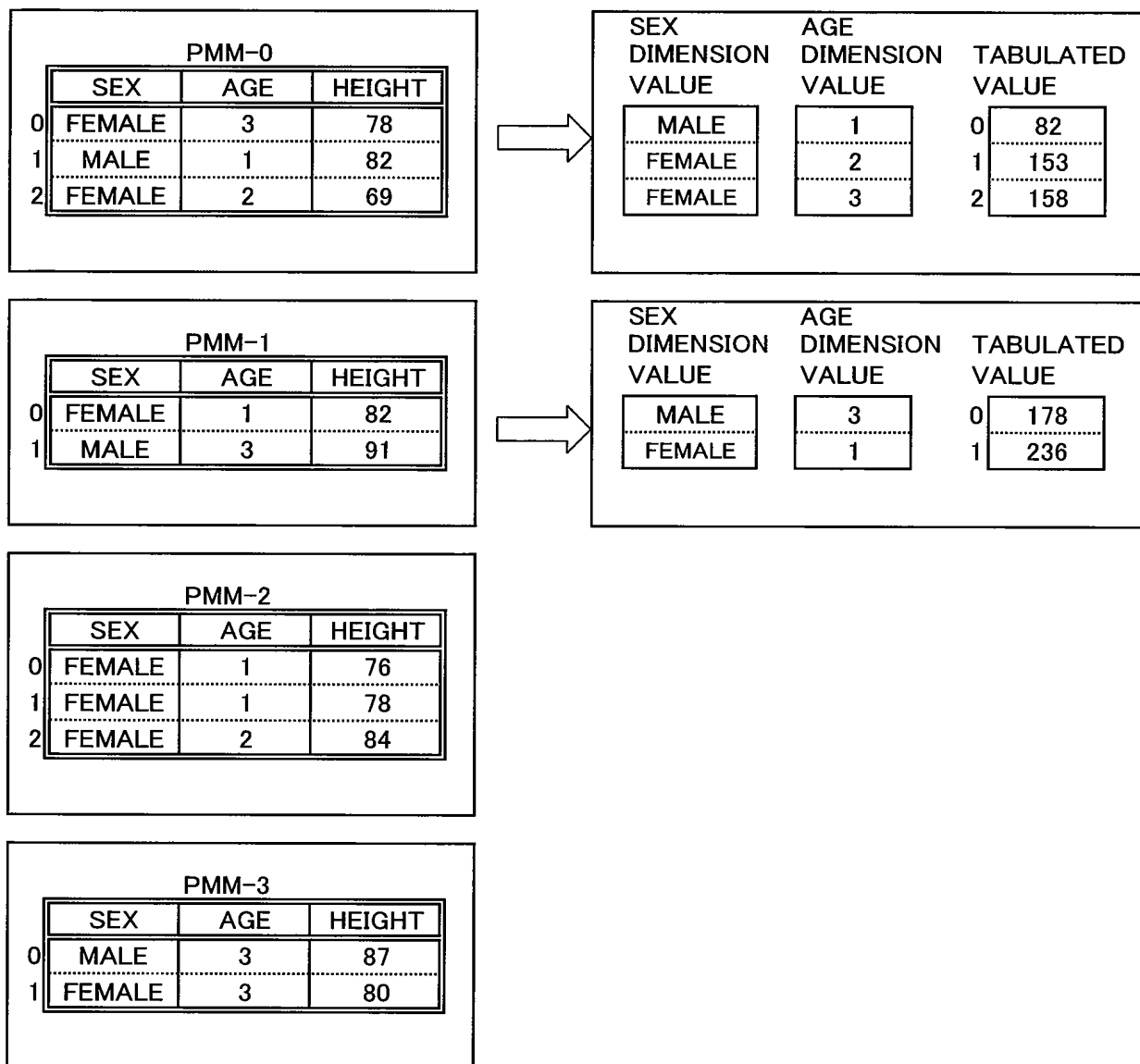


Fig.21

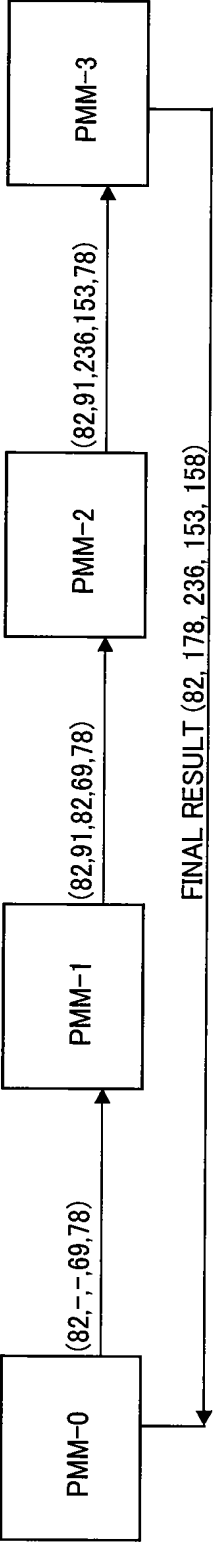


Fig.22

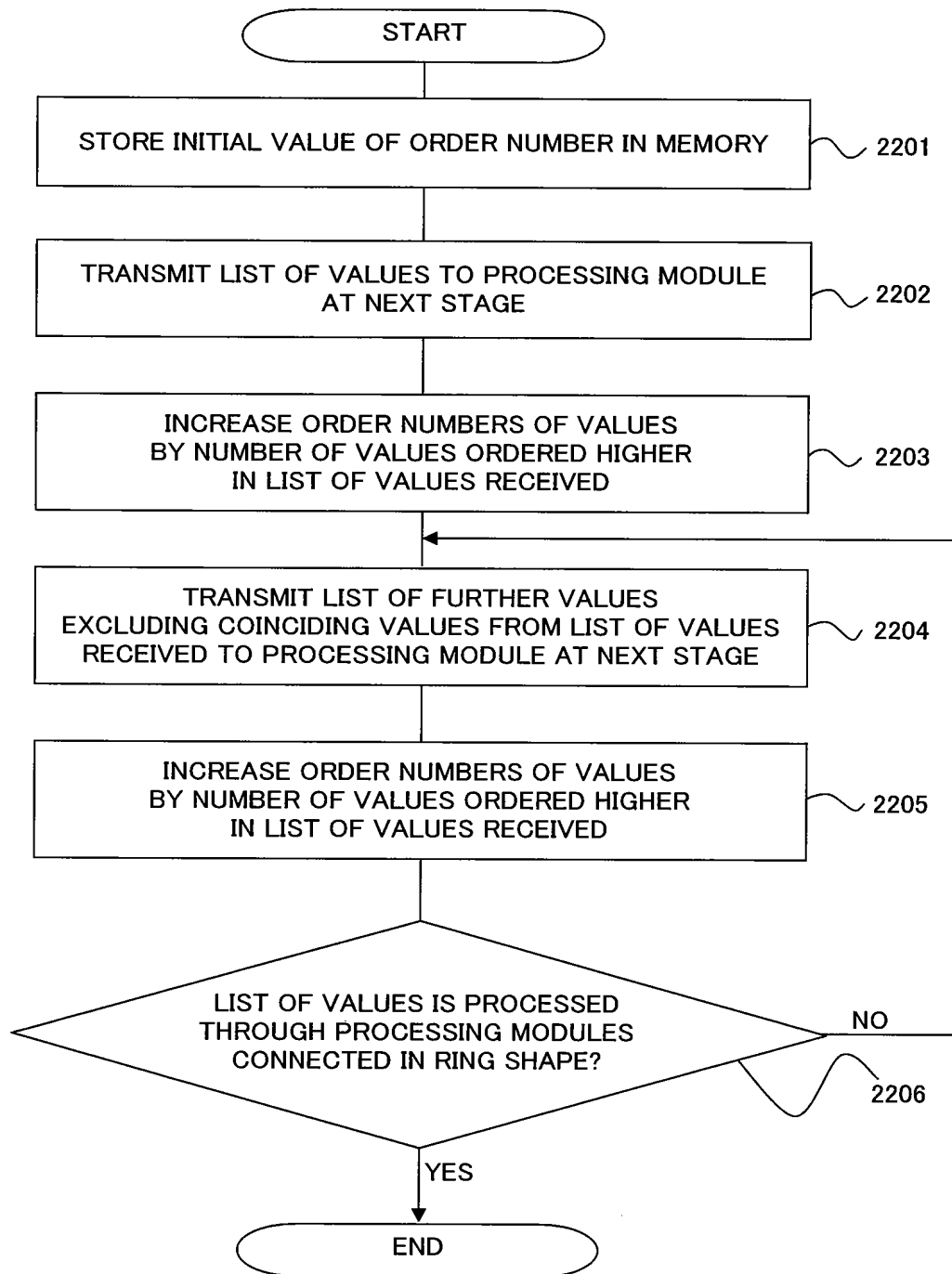


Fig.23A

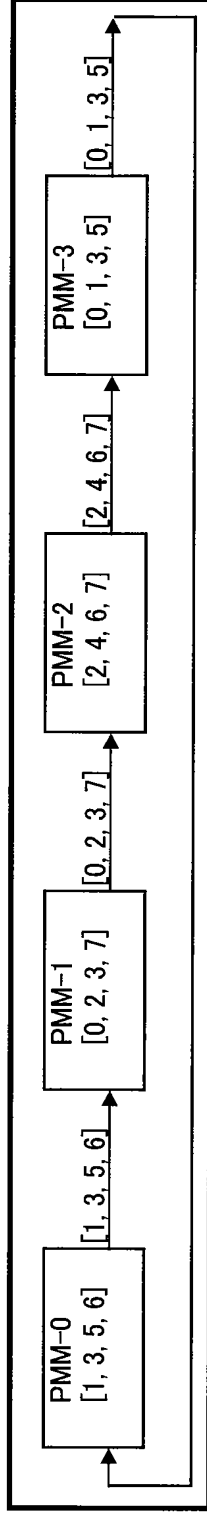


Fig.23B

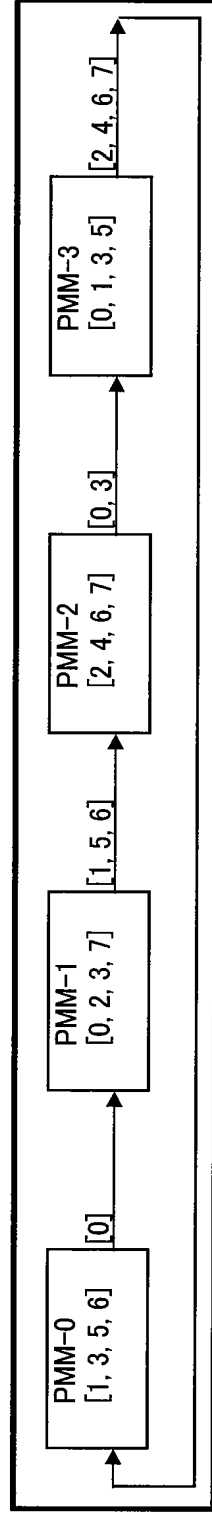


Fig.23C

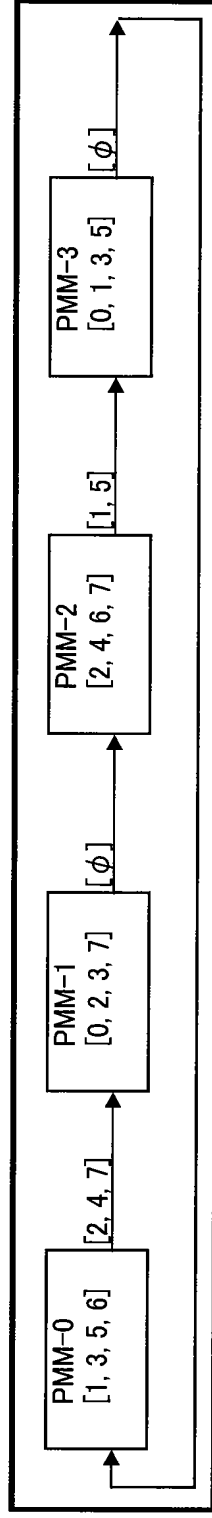


Fig.23D

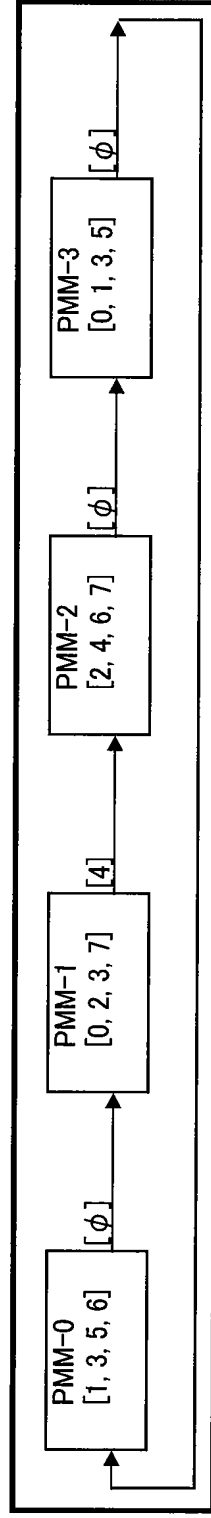


Fig.24A

RECEIVED LIST			
PMM-0	PMM-1	PMM-2	PMM-3
[0, 1, 3, 5]	[1, 3, 5, 6]	[0, 2, 3, 7]	[2, 4, 6, 7]

STEP1

Fig.24B

RECEIVED LIST			
PMM-0	PMM-1	PMM-2	PMM-3
[0, 1, 3, 5] [2, 4, 6, 7]	[1, 3, 5, 6] [0]	[0, 2, 3, 7] [1, 5, 6]	[2, 4, 6, 7] [0, 3]

STEP2

Fig.24C

RECEIVED LIST			
PMM-0	PMM-1	PMM-2	PMM-3
[0, 1, 3, 5] [2, 4, 6, 7] [ϕ]	[1, 3, 5, 6] [0] [2, 4, 7]	[0, 2, 3, 7] [1, 5, 6] [ϕ]	[2, 4, 6, 7] [0, 3] [1, 5]

STEP3

Fig.24D

RECEIVED LIST			
PMM-0	PMM-1	PMM-2	PMM-3
[0, 1, 3, 5] [2, 4, 6, 7] [ϕ] [ϕ]	[1, 3, 5, 6] [0] [2, 4, 7] [ϕ]	[0, 2, 3, 7] [1, 5, 6] [ϕ] [4]	[2, 4, 6, 7] [0, 3] [1, 5] [ϕ]

STEP4

Fig.25

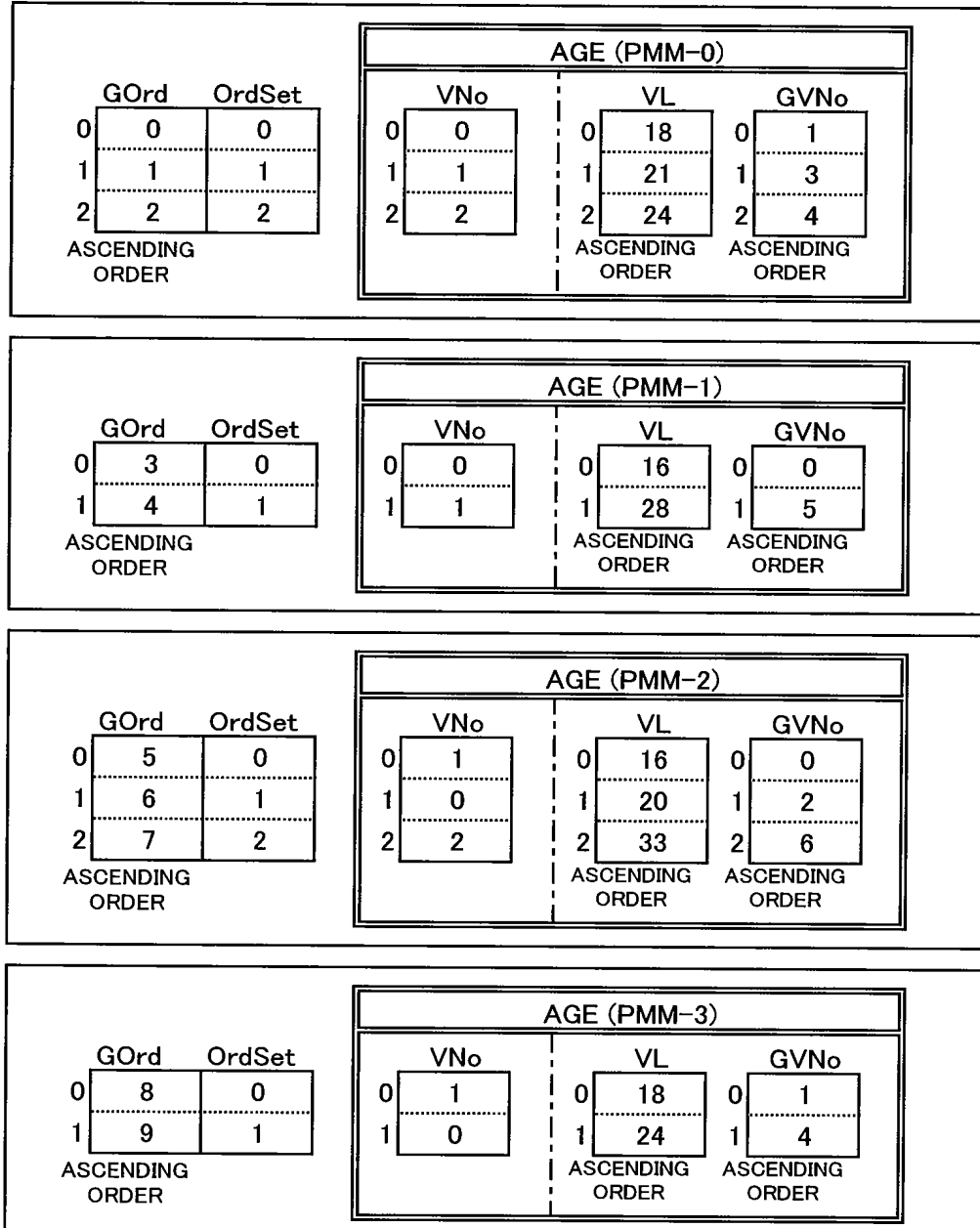


Fig.26

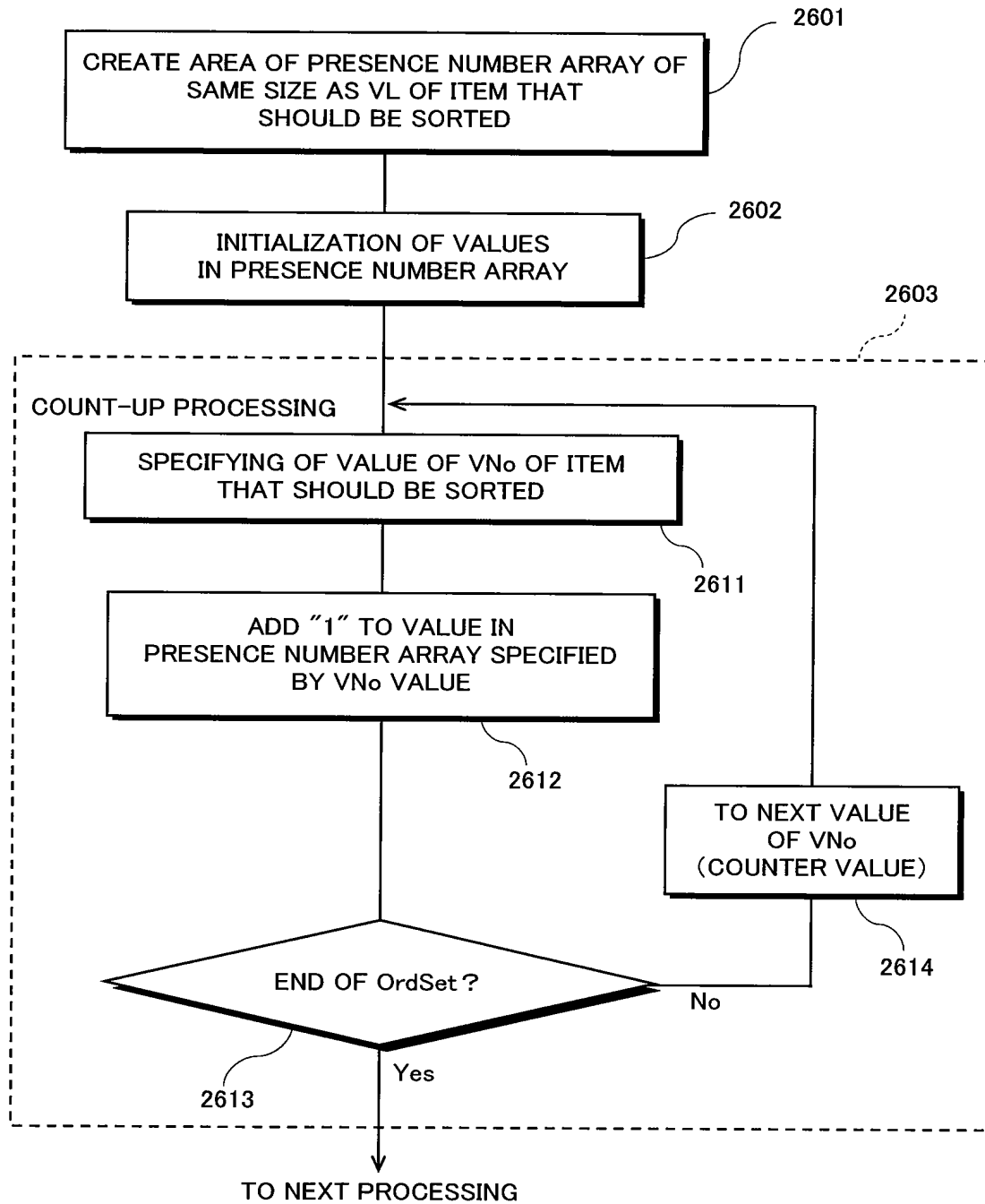


Fig.27

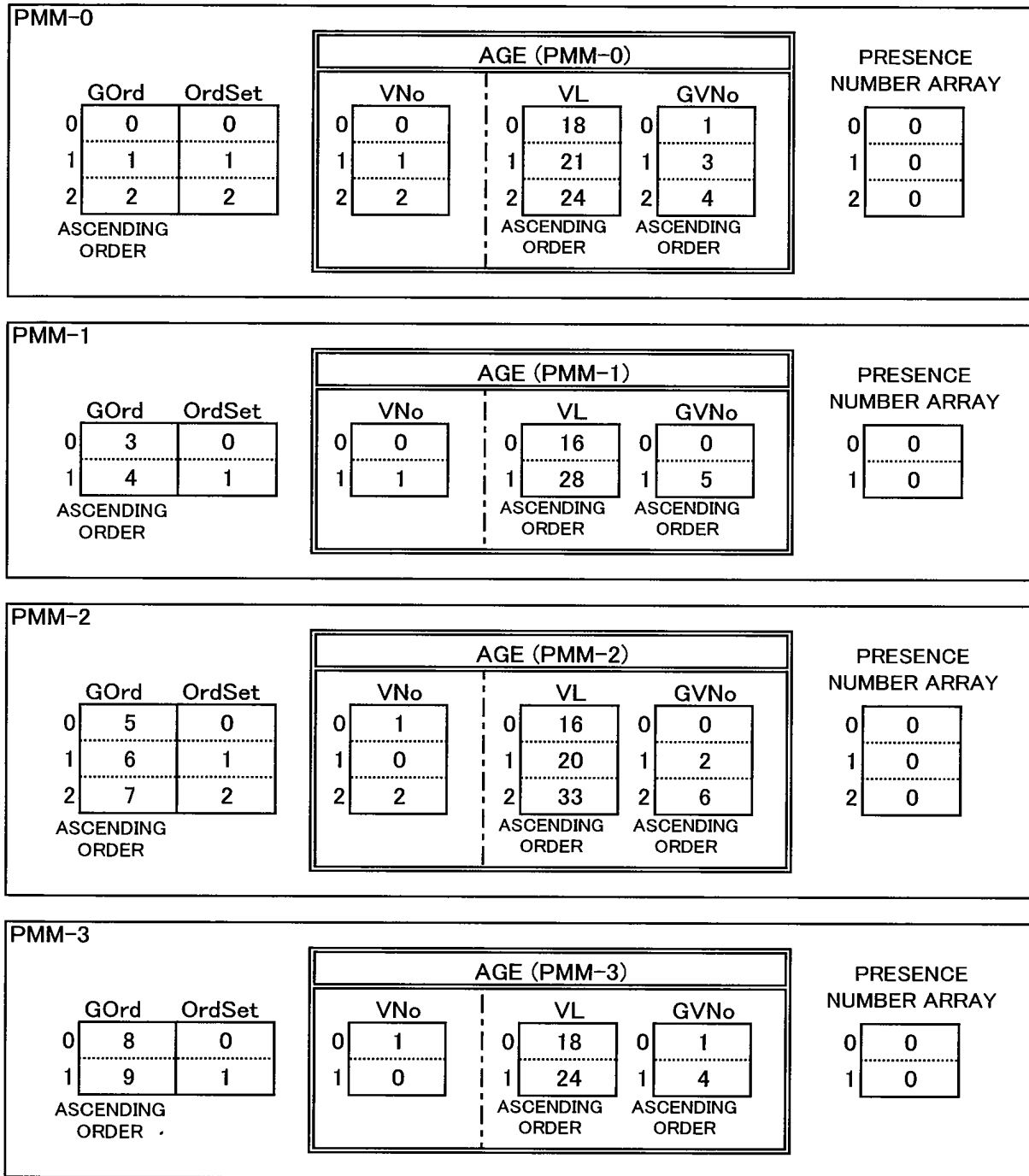


Fig.28

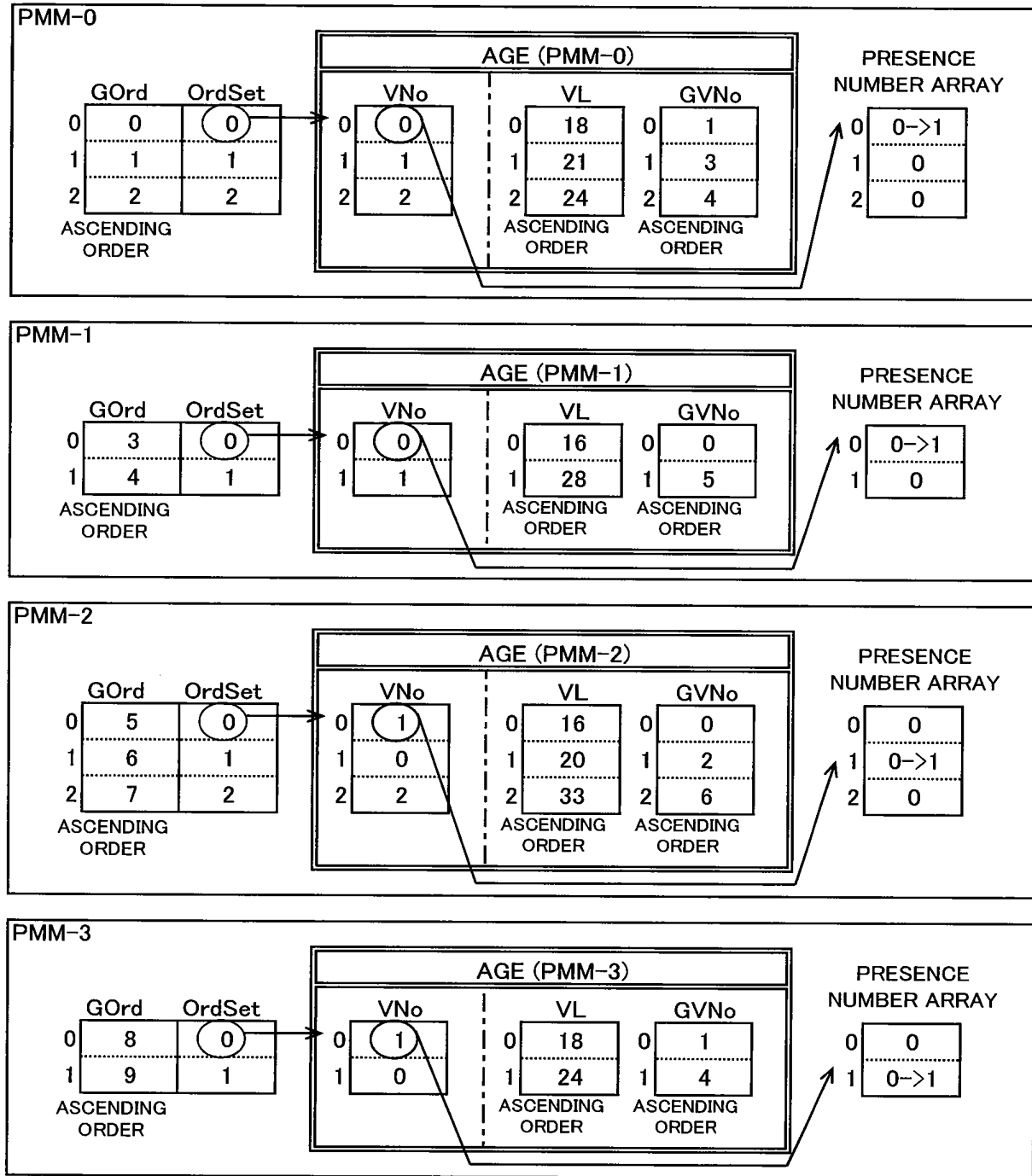


Fig.29

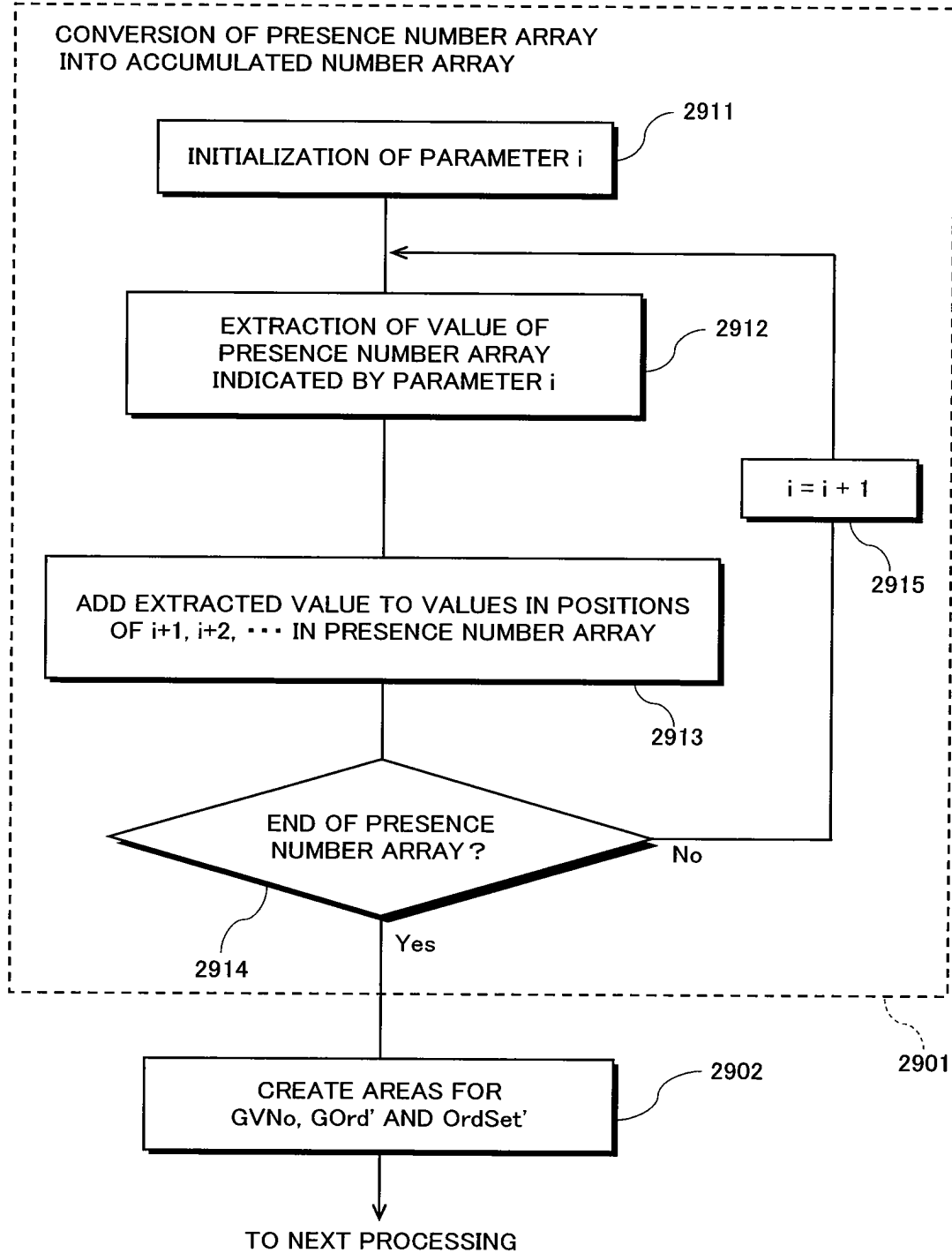


Fig.30

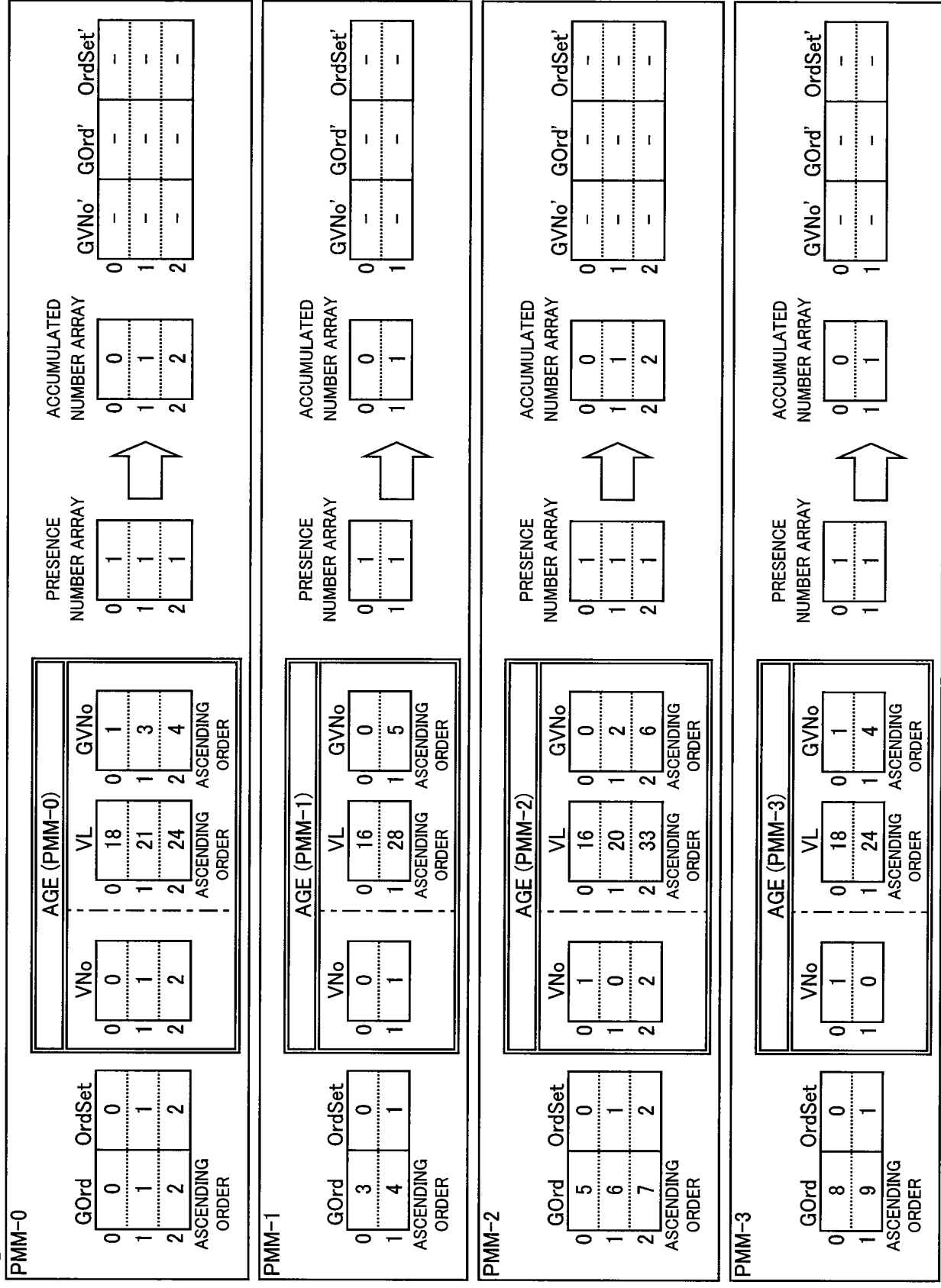


Fig.31

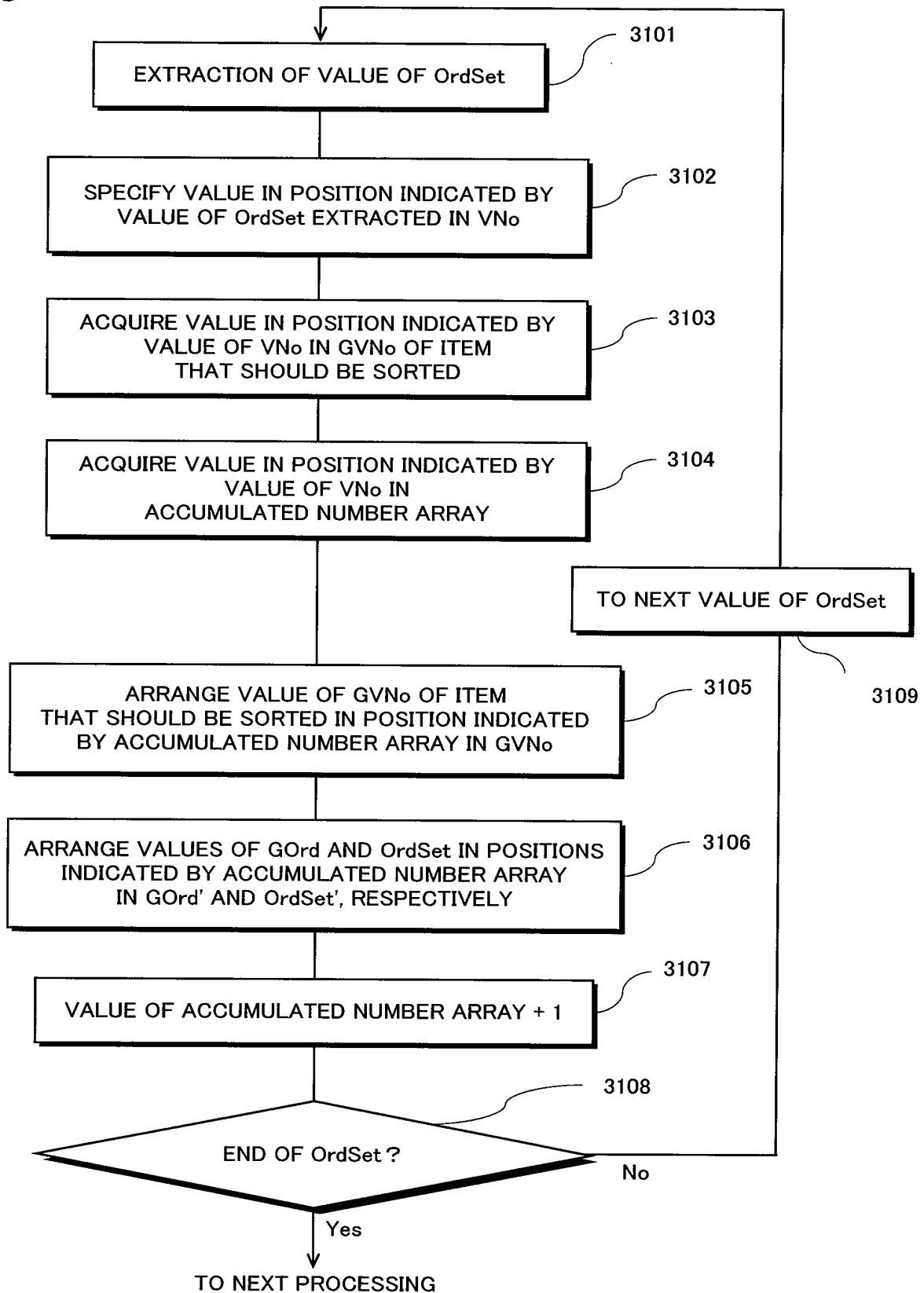


Fig.32

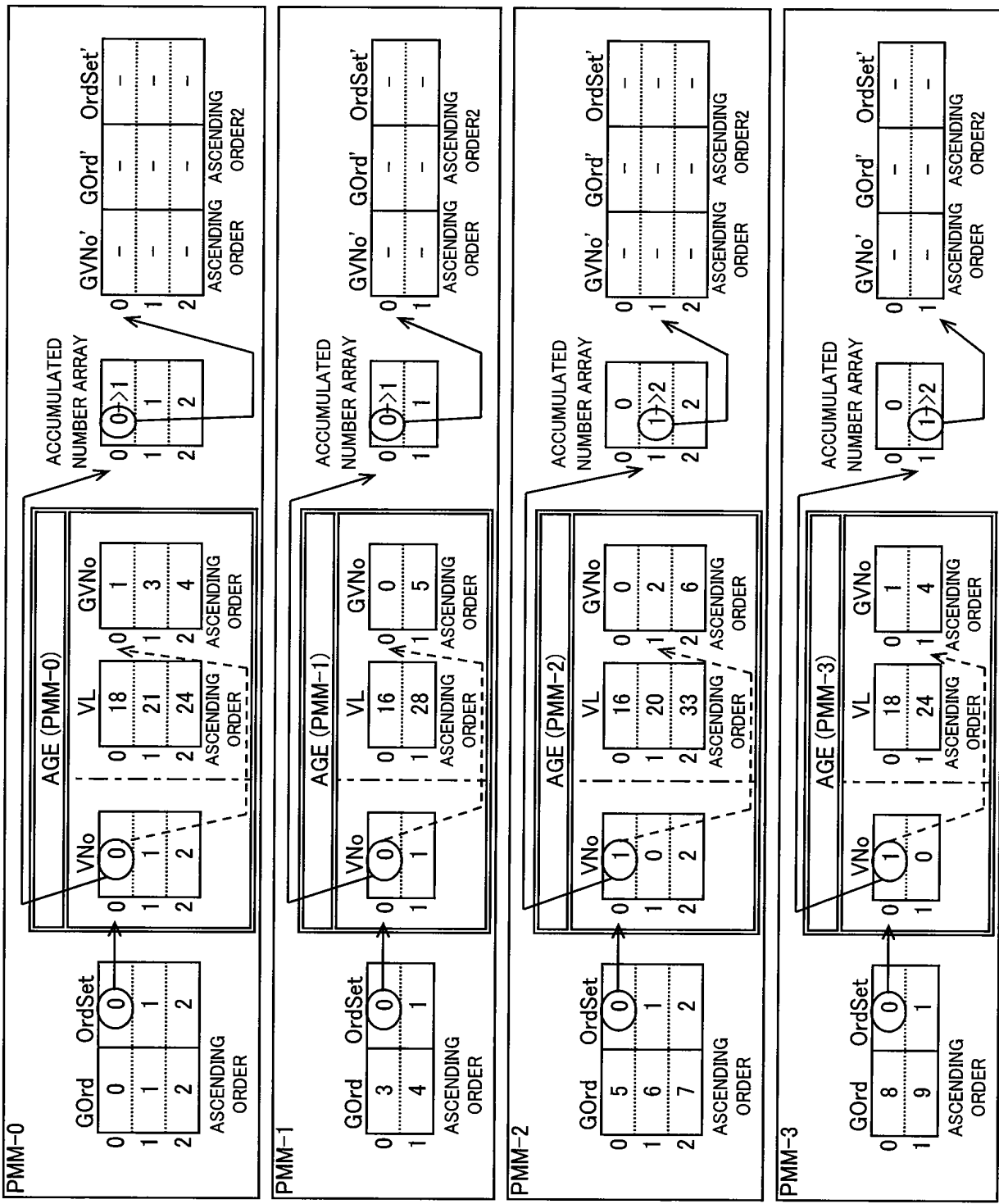


Fig.33

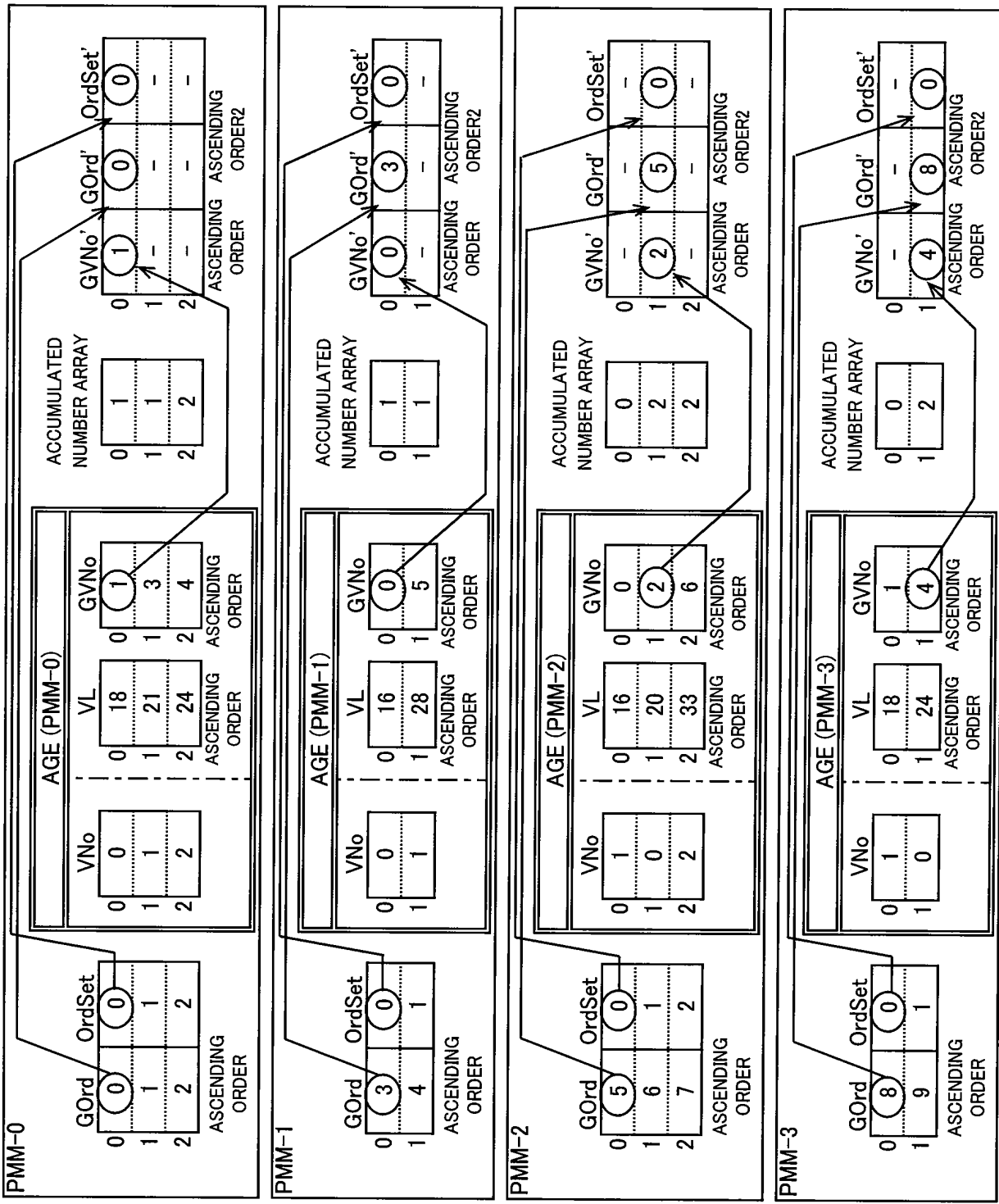


Fig.34

PMM-0				
ACCUMULATED NUMBER ARRAY		GVNo'	GOrd'	OrdSet'
0	0	1	0	0
1	1	3	1	1
2	2	4	2	2
		ASCENDING ORDER	ASCENDING ORDER 2	

PMM-1				
ACCUMULATED NUMBER ARRAY		GVNo'	GOrd'	OrdSet'
0 1	0	0	3	0
	1	5	4	1
		ASCENDING ORDER	ASCENDING ORDER 2	

PMM-2				
ACCUMULATED NUMBER ARRAY				
	0			
	1			
	2			

	GVNo'	GOrd'	OrdSet'
0	0	6	1
1	2	5	0
2	6	7	2
	ASCENDING ORDER	ASCENDING ORDER 2	

PMM-3				
ACCUMULATED NUMBER ARRAY		GVNo'	GOrd'	OrdSet'
0 1	0	0	1	9
	1	1	4	8
		ASCENDING ORDER	ASCENDING ORDER 2	

Fig.35A

ARRAY CREATION

OrdSet	GVNo OF SEX	GVNo OF AGE	GOrd
0	1	2	0
1	0	0	1
2	1	1	2

Fig.35B

ORDER NUMBER INITIALIZATION

OrdSet	ORDER NUMBER
0	0
1	0
2	0

Fig.35C

ORDER NUMBER ALLOCATION 1

OrdSet	ORDER NUMBER
0	0→1
1	0
2	0→1

Fig.35D

ORDER NUMBER ALLOCATION 2

OrdSet	ORDER NUMBER
0	1→2
1	0
2	1

Fig.35E

RESULT

ORDER NUMBER	OrdSet	GVNo OF SEX	GVNo OF AGE	GOrd
2	0	1	2	0
0	1	0	0	1
1	2	1	1	2

Fig.35F

RESULT

ORDER NUMBER	OrdSet	GVNo OF SEX	GVNo OF AGE	GOrd
0	1	0	0	1
1	2	1	1	2
2	0	1	2	0